

LISTING OF CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (canceled)

2. (previously presented) A repeater configured to implement a content protection protocol, for use in a communication system including a transmitter, an external agent configured to be coupled to the repeater and the transmitter, at least one transition minimized differential signaling-like (“TMDS-like”) link coupled to the transmitter, a second TMDS-like link, and a receiver coupled to the second TMDS-like link and configured to receive re-encrypted data transmitted over the second TMDS-like link and to decrypt the re-encrypted data, wherein the transmitter is configured to implement the content protection protocol and is operable in an encryption mode to generate encrypted data using a secret value and transmit the encrypted data over the at least one TMDS-like link, the external agent is configured to respond to a ticket request by determining or obtaining a determination as to whether to grant the request, and to send signals to the transmitter and the repeater when coupled thereto in response to each granted ticket request to enable the transmitter and the repeater to operate respectively in the encryption mode and a decryption mode, wherein the signals include at least one of the secret value, an encrypted version of the secret value, and data enabling the transmitter and the repeater to obtain the secret value, and wherein the repeater includes:

first circuitry configured to be coupled to at least one said TMDS-like link to receive the encrypted data from the transmitter and configured to operate in the decryption mode in response to at least one of the signals sent by the external agent in response to said granted ticket request to generate decrypted data by decrypting the encrypted data using the secret value and to generate translated data by processing the decrypted data; and

second circuitry coupled to the first circuitry and configured to be coupled to the second TMDS-like link, wherein the second circuitry is configured to generate re-encrypted data by encrypting the translated data, and to transmit the re-encrypted data over the second TMDS-like link when coupled to said second TMDS-like link, wherein the repeater is configured to send the ticket request to the external agent when the repeater is coupled to said external agent.

3-8. (canceled)

9. (previously presented) The repeater of claim 2, wherein the system also includes a switch, wherein the at least one TMDS-like link includes a first TMDS-like link coupled between the transmitter and the switch, a third TMDS-like link coupled to the switch, and a fourth TMDS-like link, wherein the switch is coupled to receive the encrypted data from the transmitter and to assert the encrypted data over a selected one of the fourth TMDS-like link and the third TMDS-like link, and the first circuitry is configured to be coupled to the third TMDS-like link.

10-74. (canceled)

75. (currently amended) ~~The receiver of claim 99, also including~~ A receiver configured to implement a content protection protocol, for use in a communication system also including a transmitter configured to implement the content protection protocol, a transition minimized differential signaling-like ("TMDS-like") link coupled to the transmitter, and a communication channel coupled to the transmitter, wherein the content protection protocol includes a procedure for supplying a receiver key to the receiver and a challenge-response procedure for verifying whether the transmitter has a transmitter key matching the receiver key, and the transmitter is configured to perform a predetermined mathematical function on an authentication message received over the channel to generate a result, to encrypt the result using the transmitter key to generate an encrypted result, and to send the encrypted result over the channel, and wherein the receiver includes:

circuitry, configured to be coupled to the communication channel and to encrypt first data in accordance with the protocol using the receiver key to generate an authentication message, to send the authentication message to the transmitter over the channel when coupled to said channel, to generate a decrypted result by decrypting said encrypted result using the receiver key, and to determine whether the decrypted result satisfies a predetermined criterion, wherein the receiver is configured to be coupled to the TMDS-like link, the protocol is a symmetric block protocol in which the transmitter sends encrypted data over the TMDS-like link to the receiver when the receiver is coupled to said TMDS-like link and the receiver decrypts the encrypted data in response to the receiver key and a sequence of count values, wherein the transmitter is configured to generate a pseudo-random value, the

transmitter is configured to transmit the pseudo-random value over one of the communication channel and the TMDS-like link to the receiver, and the receiver is configured to include the pseudo-random value as a field of at least one of the count values upon determining that the decrypted result satisfies the predetermined criterion.

76. (previously presented) The receiver of claim 75, wherein the communication channel is a channel of the TMDS-like link, and wherein the transmitter is configured to transmit the pseudo-random value and the encrypted result over said channel of the TMDS-like link to the receiver when the receiver is coupled to said TMDS-like link.

77-102. (canceled)

103. (currently amended) ~~The transmitter of claim 100, wherein the system also includes~~ A transmitter configured to implement a content protection protocol, for use in a communication system also including a receiver configured to implement the content protection protocol, a transition minimized differential signaling-like ("TMDS-like") link coupled to the receiver, and a communication channel coupled to the receiver, wherein the content protection protocol includes a procedure for supplying a receiver key to the receiver and a challenge-response procedure for verifying whether the transmitter has a transmitter key matching the receiver key, and the receiver is configured to encrypt first data in accordance with the protocol using the receiver key to generate an authentication message, to send the authentication message over the channel, to generate a decrypted result by decrypting an encrypted result received over the channel using the receiver key, and to determine whether the decrypted result satisfies a predetermined criterion, and wherein the transmitter includes:

circuitry, configured to be coupled to the communication channel and to perform a predetermined mathematical function on said authentication message received over the channel to generate a result, to encrypt the result using the transmitter key to generate an encrypted result, and to send the encrypted result to the receiver over the channel when coupled to said channel, wherein the transmitter is configured to be coupled to the TMDS-like link, the protocol is a symmetric block protocol in accordance with which the receiver decrypts encrypted data received over the TMDS-like link in response to the receiver key and a sequence of count values, the transmitter is configured to send the encrypted data over the

TMDS-like link to the receiver when coupled to said TMDS-like link, the transmitter is configured to generate a pseudo-random value and to transmit the pseudo-random value over one of the communication channel and the TMDS-like link to the receiver when coupled to the communication channel and the TMDS-like link, and the receiver is configured to include the pseudo-random value as a field of at least one of the count values upon determining that the decrypted result satisfies the predetermined criterion.

104. (previously presented) The transmitter of claim 103, wherein the communication channel is a channel of the TMDS-like link, and the transmitter is configured to transmit the pseudo-random value and the encrypted result over said channel of the TMDS-like link to the receiver when coupled to said TMDS-like link.